## (19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 20 January 2005 (20.01.2005)

**PCT** 

## (10) International Publication Number WO 2005/006064 A1

(51) International Patent Classification7: G03F 9/00, H04N 13/00

G02F 1/1333.

(21) International Application Number:

PCT/GB2004/002995

(22) International Filing Date:

9 July 2004 (09.07.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 0316220.3

10 July 2003 (10.07.2003)

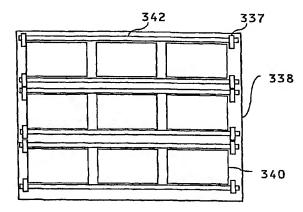
- (71) Applicant (for all designated States except US): OCUITY LIMITED [GB/GB]; 77 Heyford Park, Upper Heyford, Oxfordshire PX25 5HD (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): HARROLD. Jonathan [GB/GB]; 8 Robins Grove, Warwick, Warwickshire CV34 6RF (GB). WOODGATE, Graham.

John [GB/GB]; 9 Vicarage Road, Henley-on-Thames, Oxfordshire RG9 1HF (GB).

- (74) Agents: MERRYWEATHER, Colin, Henry et al.; J.A. Kemp & Co., 14 South Square, Gray's Inn, London WC1R 5JJ (GB).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,

[Continued on next page]

(54) Title: ALIGNMENT OF ELEMENTS OF A DISPLAY APPARATUS



(57) Abstract: To align a display substrate comprising an array of pixels with a component substrate comprising an array of optical components, the display substrate is divided from a display motherglass formed with an array of panels each comprising an array of pixels sufficient for a single display substrate and with, in respect of each panel, a first alignment feature having a surface relief aligned with the array of pixels. The component substrate is formed with an array of optical components and a second alignment feature aligned with the array of optical components, the second alignment feature having a surface relief shaped to register with the first alignment feature. The display substrates is attached to the component substrate with the first and second alignment features in registration with each other. The alignment of the first alignment feature with the array of pixels may be carried out at the motherglass stage in respect of the entire motherglass. The registration of the alignment features during attachment is a straightforward mating process which does not require precision alignment apparatus. Thus the yield can be increased.



## WO 2005/006064 A1



SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

## Published:

with international search report